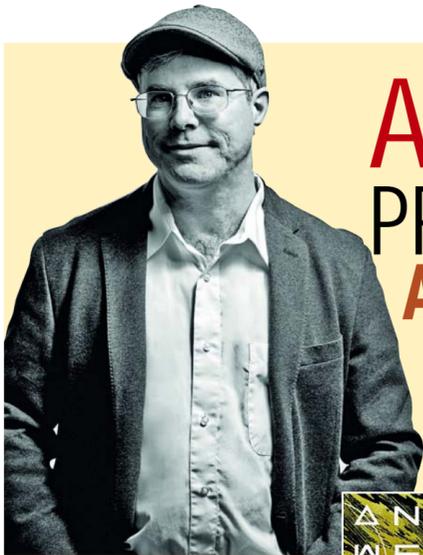


REASONS TO READ

ANDY WEIR'S PROJECT HAIL MARY

An astronaut tries to save Earth while alone in outer space



Here are few reasons you shouldn't miss 2022's Audiobook of the Year

Nitya.Shukla@timesgroup.com

One of the biggest books to dominate 2021, 'Project Hail Mary', is a science fiction novel by Andy Weir, which continues its world domination in 2022. Besides glowing reviews on social media and the internet, 'Project Hail Mary' has been collecting awards like feathers, including Amazon's best science fiction and fantasy book (2021), and Goodreads Choice Award for the Best Science Fiction Novel. Let's find out why...

THE BOOK'S CENTRAL MYSTERY IS UNIQUE

Like 'The Martian', 'Project Hail Mary' is a scientific mystery, thriller and space adventure built on an interesting premise — the 'Astrophage'. In the book,

Blake Crouch, the best selling author of 'Wayward Pines Trilogy', 'Dark Matter' and 'Recursion', said that 'Project Hail Mary' was "destined to become a classic". The book has also been praised by Bill Gates, GatesNotes, New York Public Library, 'Parade', 'Newsweek', Polygon, Shelf Awareness, She Reads and Kirkus Reviews. It is reportedly being adapted for a film featuring Ryan Gosling



IT OFFERS AN IDEA OF THE FIRST CONTACT

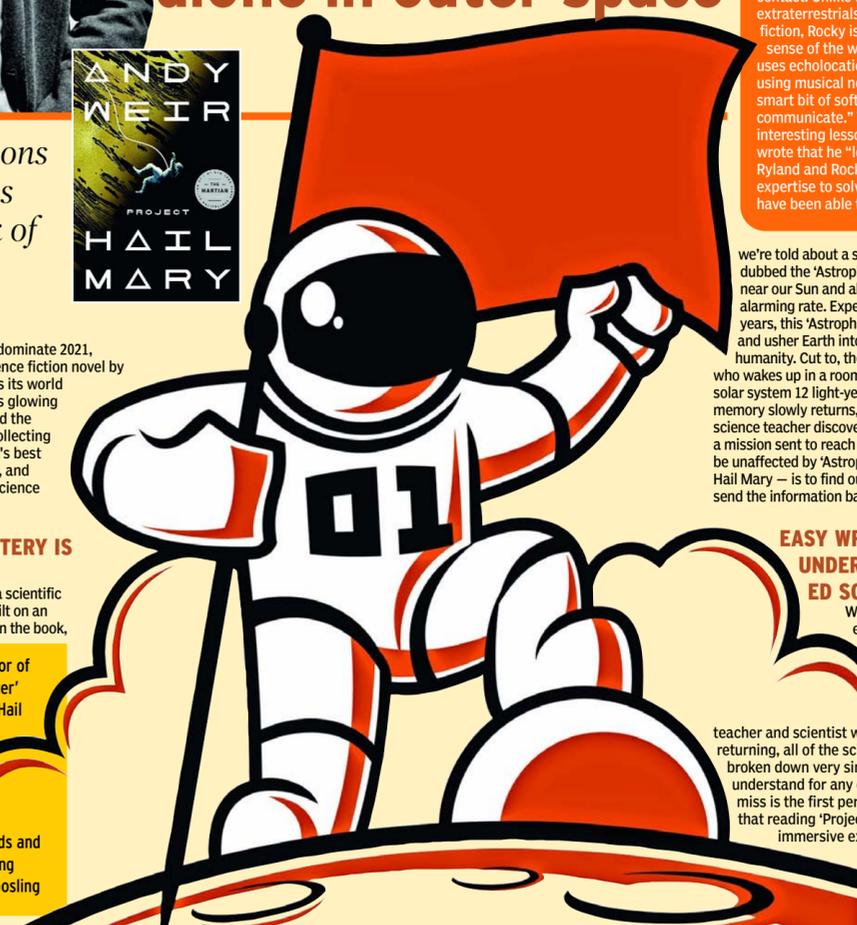
On his mission, Grace meets a strange alien — whom he calls 'Rocky' — who is also on a similar mission, to save his home planet from an 'Astrophage' induced catastrophe. Noting this plot point, in his review on www.gatesnotes.com/, Bill Gates wrote that, "Weir offers a somewhat plausible notion of what it would be like to make first contact. Unlike the humanoid extraterrestrials you see in a lot of science fiction, Rocky is completely alien in every sense of the word. He breathes ammonia, uses echolocation to "see," and speaks using musical notes. Ryland has to create a smart bit of software before they can communicate." This premise offers an interesting lesson in problem-solving. Gates wrote that he "loved reading about how Ryland and Rocky combined their species' expertise to solve problems they wouldn't have been able to tackle on their own."

We're told about a strange, single-celled organism, dubbed the 'Astrophage', which is rapidly growing near our Sun and absorbing its energy at an alarming rate. Experts concur that in less than 19 years, this 'Astrophage' will eat the Sun entirely and usher Earth into an ice age, thus killing humanity. Cut to, the main character, Ryland Grace, who wakes up in a room with no idea of where he is (a solar system 12 light-years from Earth) or why. As his memory slowly returns, Grace, a former high school science teacher discovers that he's the sole survivor of a mission sent to reach the nearest star that seems to be unaffected by 'Astrophage'. His mission — Project Hail Mary — is to find out how to kill the organism and send the information back to Earth to save humanity.

EASY WRITING STYLE TO UNDERSTAND COMPLICATED SCIENTIFIC THEORIES

Weir, a former software engineer, channels his love of aerospace and hard sciences into sci-fi story told with oodles of humour. Because of Grace's perspective as a middle school science teacher and scientist whose memory is slowly returning, all of the scientific concepts and terms are broken down very simply, making it easy to understand for any of us. Another point not to miss is the first person narrative. Readers report that reading 'Project Hail Mary' is an incredibly immersive experience.

Also, the story is filled with constant surprises and twists — and makes for an especially engaging audiobook.



SPACE TRIVIA

The word 'spaceship' dates back to 1880. The credit for spaceship in the sense of "a manned spacecraft" usually goes to J J Astor's 1894 novel 'A Journey in Other Worlds', a futuristic tale set in the year 2000. However, space-ship also appears in an 1880 'Pall Mall Gazette', in reference to Jules Verne, 23 years before the first airplane took flight.

- The phrase 'parallel universe' was first used in H G Wells' 1923 novel 'Men like Gods' — which featured a utopia located in a parallel universe.
- In the first chapter of his 1948 novel 'Space Cadet', Robert Heinlein predicted mobile phone technology.
- The phrase 'science-fiction' was first found in print in 1851.
- All 27 of the known moons of the planet Uranus are named after characters from the work of Shakespeare and Alexander Pope.

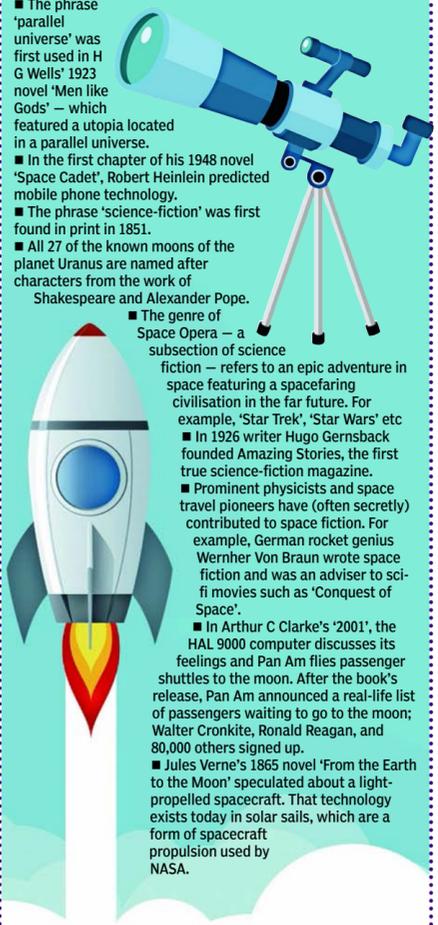
■ The genre of Space Opera — a subsection of science fiction — refers to an epic adventure in space featuring a spacefaring civilisation in the far future. For example, 'Star Trek', 'Star Wars' etc

■ In 1926 writer Hugo Gernsback founded Amazing Stories, the first true science-fiction magazine.

■ Prominent physicists and space travel pioneers have (often secretly) contributed to space fiction. For example, German rocket genius Wernher Von Braun wrote space fiction and was an adviser to sci-fi movies such as 'Conquest of Space'.

■ In Arthur C Clarke's '2001', the HAL 9000 computer discusses its feelings and Pan Am flies passenger shuttles to the moon. After the book's release, Pan Am announced a real-life list of passengers waiting to go to the moon; Walter Cronkite, Ronald Reagan, and 80,000 others signed up.

■ Jules Verne's 1865 novel 'From the Earth to the Moon' speculated about a light-propelled spacecraft. That technology exists today in solar sails, which are a form of spacecraft propulsion used by NASA.

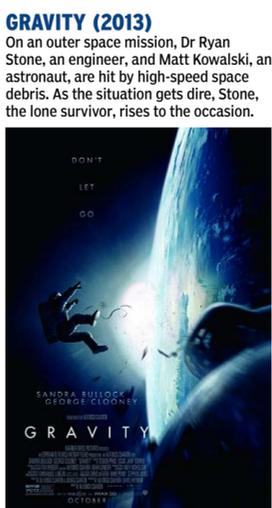


SPACE: THE FINAL FRONTIER

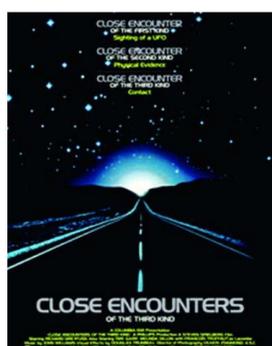
HERE ARE SOME OF THE BEST FILMS MADE ON HUMANKIND'S ENDEAVOUR TO UNDERSTAND SPACE



THE MARTIAN (2015)
When astronauts blast off from the planet Mars, they leave behind Mark Watney (Matt Damon), presumed dead after a fierce storm. With only a meager amount of supplies, the stranded visitor must utilize his wits and spirit to find a way to survive on the hostile planet.



GRAVITY (2013)
On an outer space mission, Dr Ryan Stone, an engineer, and Matt Kowalski, an astronaut, are hit by high-speed space debris. As the situation gets dire, Stone, the lone survivor, rises to the occasion.



CLOSE ENCOUNTERS OF THE THIRD KIND (1977)
Although aliens begin to make their presence felt to humans, the government denies their existence. However, when Roy, an electrical lineman, encounters a UFO, he is drawn to the Wyoming wilderness.



APOLLO 13 (1995)
On the Apollo 13 lunar mission, astronauts Jim Lovell (Tom Hanks), Fred Haise (Bill Paxton) and Jack Swigert (Kevin Bacon) find everything going according to plan after leaving Earth's orbit. However, when an oxygen tank explodes, the scheduled moon landing is called off. Subsequent tensions within the crew and numerous technical problems threaten both the astronauts' survival and their safe return to Earth...



STAR WARS: A NEW HOPE (1977)
In this first 'Star War' franchise movie, Princess Leia gets abducted by the insidious Darth Vader. Luke Skywalker then teams up with a Jedi Knight, a pilot and two droids to free her and to save the galaxy from the violent Galactic Empire.



MOON (2009)
Astronaut Sam, the sole employee working at a lunar station with his computer, GERTY, is nearing the end of his three-year work contract. Just before he returns home, he meets with a fatal accident.



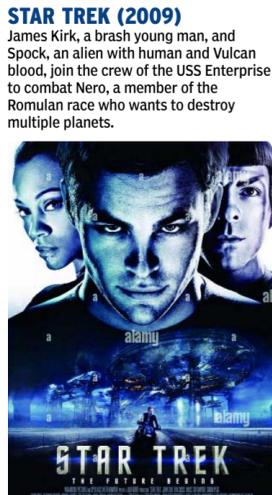
FIRST MAN (2018)
Hoping to reach the moon by the end of the decade, NASA plans a series of extremely dangerous missions in the early 1960s. Engineer Neil Armstrong joins the space programme. On July 16, 1969, the world watches in wonder as Armstrong, Buzz Aldrin and Michael Collins embark on the historic Apollo 11 spaceflight.



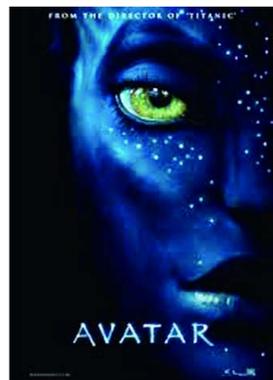
INTERSTELLAR (2014)
When Earth becomes uninhabitable in the future, a farmer and ex-NASA pilot, Joseph Cooper, is tasked to pilot a spacecraft, along with a team of researchers, to find a new planet for humans.



CONTACT (1997)
Dr Ellie, a radio astronomer, discovers the existence of intelligent aliens through radio signals. She and a group of fellow scientists decipher the instructions that they send to build a machine.



STAR TREK (2009)
James Kirk, a brash young man, and Spock, an alien with human and Vulcan blood, join the crew of the USS Enterprise to combat Nero, a member of the Romulan race who wants to destroy multiple planets.



AVATAR (2009)
Jake, who is paraplegic, replaces his twin on the Na'vi-inhabited Pandora for a corporate mission. After the natives accept him as one of their own, he must decide where his loyalties lie.



AD ASTRA (2019)
Astronaut Roy McBride undertakes a dangerous mission across the solar system to uncover the truth about his missing father and a series of strange power surges.

WONDEROUS WUSHU

A sport practised in ancient China for health benefits and for propagating traditional culture and skills, wushu has come a long way - with it now considered an international sport



KNOWING THE GAME

Wushu is a combination of a performance and a full-contact sport derived from Chinese martial arts. The word 'wushu' comes from 'wu' meaning war and 'shu' meaning art. Smoothness of movements, keeping good balance, synchronisation and coordination among participants — in case of team events — are integral to the sport. It includes striking, grappling, throwing, agility, explosive power, and relaxed synchronised movements.

CLOTHING

The dress of the wushu practitioner is usually made of silk. The loose fitting, free-flowing outfit allows free movement.



Wushu shoes are very similar to lightweight canvas tennis shoes, with rubber grip soles.

KEY TOURNAMENTS

World Wushu Championships, World Junior Wushu Championships, World Games World Combat Games, Asian Games, East Asian Games, South Asian Games, Southeast Asian Games, Mediterranean Games, Lusofonia Games

TWO DISCIPLINES

The sport is categorised into two main categories, namely **Taolu** (Routines Competition) and **Sanda** (Free-Fighting Competition).

A Taolu bout is a combination of movements and routines of hand, leg, and footwork choreographed according to attack and defence principles. The basic movements involve sweep, jumps, stances, kicks, punches, and throws. These are changed according to the competitions to highlight one's strengths. Competitors are assessed on the degree of difficulty and the technical execution of the routines. Most movements in competitions today are new, modernised recombinations of traditional routines. Modern wushu competitors also train in aerial techniques such as 540 and 720 degree jumps and kicks to add more difficulty and style to their forms.

Each bout or form could last from 1 minute, 20 seconds to over five minutes.

Forms can be held in singles, doubles or in a team off.

Each competitor or competing duo/team begins with 10 points, five for quality of movements and five for overall performance. Judges deduct points for errors or flaws in execution and performance. Contestants are judged on various criteria, which include rhythm of movement, accurate application of force, coordination and style.

Sanda is much like kick boxing, with more grappling techniques. The modern unarmed combat sport primarily makes use of punching, kicking, throwing, wrestling and defensive techniques. The full-contact bouts are free flowing and exciting.

Competition bouts take place on an elevated, 8 by 8m platform called a 'leitai'.

Competition bouts comprise 3 rounds, each lasting two minutes with a one-minute rest period between rounds.

Athletes get points for successfully executed techniques.

WEAPONS

There are over twelve traditional weapons used by wushu fighters. These include longer range weapons, like the rope dart, the whip, the staff, and the sword. Closer range weapons include various types of knives and daggers. The kind of weapon used depends on the class or type of technique being used during bouts. A tassel, red horsehair or beautiful silk cloth are often tied at the end of the weapons. These sway gracefully when the wushu players move.

The short weapons: Dao blades are flat and broad swords and daggers. They are curved in shape and sharpened along one side only.

Nandao class or Southern Style – the blade is slightly lengthened.

Jian class – straight sword or blade that is double-edged.

Taijijian class – a straight two-edged sword.

Long weapons: Staff: The Gunshu is a traditional long-staff made from white wax wood. Since the 2010s, the more lighter and durable carbon fibre staff have been used in international competitions.

Nangun or southern style staff are much thicker and heavier.

Spear: The Qiang is a flexible spear often seen with red horsehair attached to it. The flexibility of the shaft of the spear enables it to be used in a whipping action, allowing the user to attack from unexpected angles.

TOP INDIAN PLAYERS

- Surya Bhanu Pratap Singh
- Yumnam Sanathoi Devi
- Sandhyarani Devi Wangkhem
- Rajvir Singh
- Pawan Gupta
- Pema Khandu

TOP INTERNATIONAL PLAYERS

- Jet Li
- Steven Seagal
- Wesley Snipes
- Jean Claude Van Damme
- Donnie Yen

HISTORY

Wushu developed in the People's Republic of China after 1949, in an attempt to nationalise the practice of traditional Chinese martial arts. The origins of the sport may be traced back to the Bronze Age or even earlier, when men developed techniques to defend against both wild animals and other human beings. Later, during the Sang dynasty, wushu also became popular among the common people as a means of self-defense and health improvement, as well as entertainment. In the early 20th century, wushu developed into a popular sport.

In 1923, the Chinese National Wushu Games were held in Shanghai, and in 1936 a Chinese wushu delegation gave a demonstration at the XI Olympic Games in Berlin. In the following years, wushu competition formats and rules were implemented, and teaching methods and materials were standardised, and in 1985 the first International Invitational Wushu Tournament was held in Xi'an, China. On October 3, 1990 the IWUF was officially founded.

HAND FORMS

Wushu also uses various wrist movements called hand forms, like the **palm, hook, claw and punch**. Contemporary wushu borrows a lot from Chinese martial art styles.



STANCES

Mastering the various stances that are part of wushu are important for good performances. There are two aspects to it. The passive stance or holding a position, which develops endurance in muscles. The active stance helps the player transition for power generation and execution. The horse stance, front stretch kick, wheeling arms-ground slap, travelling stance, front slap kick are among the most commonly-used stances.

Photo: GETTY IMAGES